

Applic. No. 09/922,464

Amdt. dated June 30, 2004

Reply to Office action of March 30, 2004

Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1-10, 12-15, 17, and 28-30 are now in the application.

Claims 1, 23, 29, and 30 have been amended.

In item 3 on page 2 of the above-identified Office action, claims 29 and 30 have been rejected as being indefinite under 35 U.S.C. § 112.

More specifically, the Examiner has stated that "said deposit control device" lack proper antecedent basis. Claims 29 and 30 have been amended so as to facilitate prosecution of the application. Therefore, the rejections are believed to have been overcome.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, first and second paragraphs. Should the Examiner find any further objectionable items, counsel would appreciate a telephone call during which the matter may be resolved. The above-noted changes to the claims are provided solely for cosmetic or clarificatory reasons. The changes are not provided for overcoming the prior art nor

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for any reason related to the statutory requirements for a patent.

In item 5 on page 3 of the Office action, claims 1, 4-6, 15, 18, 20-23, and 25-30 have been rejected as being obvious over Lahrman et al. (U.S. Patent No. 6,035,471) (hereinafter "Lahrman") in view of Applicant's admitted prior art (hereinafter "AAPA") under 35 U.S.C. § 103.

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. The claims are patentable for the reasons set forth below. Support for the changes is found in Figs. 1-7 of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*:

at least one transmitter for transmitting electromagnetic radiation to the at least one body and reflecting the electromagnetic radiation off the surface inside the body, the at least one transmitter disposed at one of the opposite longitudinal end surfaces and being connected to the at least one body, and at least one detector for

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detecting a presence of the deposits at the surface, the at least one detector disposed at one of the opposite longitudinal end surfaces and being connected to the at least one body and measuring electromagnetic radiation received from the at least one transmitter after reflection at the surface.

It is noted that the corporate assignee of the Lahrman reference is also the assignee of the instant application. Therefore, applicants are very familiar with the Lahrman reference.

The Lahrman reference discloses a method for detecting impermissibly high scaling in a water-conducting domestic appliance. The appliance includes a measurement section having a light transmitter (2) and a light receiver (3), which are disposed opposite each other on the outer circumference of a pipe section (4). As the chalk deposit on the pipe section (4) increases, the light radiated by the light transmitter is attenuated, with the result that the magnitude of the output signal from the light receiver (3) changes in a corresponding manner.

Applicants respectfully disagree with the Examiner's comments in item 5 on page 3 of the Office action that Lahrman discloses "the detector being connected to the at least one body and measuring electromagnetic radiation received from the

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transmitter after reflection at the surface". Lahrman does not disclose a reflection at a surface. Lahrman discloses that the light radiated by the light transmitter is attenuated, with the result that the magnitude of the output signal from the light receiver changes in a corresponding manner. Therefore, contrary to the Examiner's comments, the Lahrman reference does not disclose that the detector is connected to the at least one body and measures electromagnetic radiation received from the transmitter after reflection at a surface

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

The references do not show or suggest:

at least one transmitter for transmitting electromagnetic radiation to the at least one body and reflecting the electromagnetic radiation off the surface inside the body, the at least one transmitter disposed at one of the opposite longitudinal end surfaces and being connected to the at least one body, and at least one detector for detecting a presence of the deposits at the surface, the at least one detector disposed at one of the opposite longitudinal end surfaces and being connected to the at least one body and measuring

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electromagnetic radiation received from the at least one transmitter after reflection at the surface, as recited in claim 1 of the instant application.

The Lahrman reference discloses a light transmitter (2) and a light receiver (3), which are disposed opposite each other on the outer circumference of a pipe section (4). The Lahrman reference does not disclose disposing a light transmitter at a longitudinal end surface of a body and a light receiver at a longitudinal end surface a body. This is contrary to the invention of the instant application as claimed, which recites disposing at least one transmitter at one of the opposite longitudinal end surfaces and connecting the transmitter to the at least one body, and disposing at least one detector at one of the opposite longitudinal end surfaces and connecting the detector to the at least one body.

Furthermore, the Lahrman reference discloses transmitting light across a circumference of a pipe section. As the chalk deposit on the pipe section (4) increases, the light radiated by the light transmitter is attenuated. The Lahrman reference does not disclose reflection of electromagnetic radiation at a surface of the pipe. This is contrary to the invention of the instant application as claimed, which recites reflecting the electromagnetic radiation off the inside surface of the body on which deposits occur influencing

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reflection properties for the electromagnetic radiation, and detecting the reflected electromagnetic radiation with at least one detector.

AAPA does not make up for the deficiencies of Lahrman.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

Since claim 1 is believed to be allowable, dependent claims 4-6, 15, 18, 20-22, and 28-30 are believed to be allowable as well.

Claim 23 calls for, *inter alia*:

providing at least one transmitter at one of the opposite longitudinal end surfaces and connecting the transmitter to the at least one body, and providing at least one detector at one of the opposite longitudinal end surfaces and connecting the detector to the at least one body.

Claim 23 calls for, *inter alia*:

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reflecting the electromagnetic radiation off the inside surface of the body on which deposits occur influencing reflection properties for the electromagnetic radiation, and detecting the reflected electromagnetic radiation with the at least one detector.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

The references do not show or suggest providing at least one transmitter at one of the opposite longitudinal end surfaces and connecting the transmitter to the at least one body, and providing at least one detector at one of the opposite longitudinal end surfaces and connecting the detector to the at least one body, as recited in claim 23 of the instant application. The Lahrman reference discloses a light transmitter (2) and a light receiver (3), which are disposed opposite each other on the outer circumference of a pipe section (4). The Lahrman reference does not disclose disposing a light transmitter at a longitudinal end surface of a body and a light receiver at a longitudinal end surface a body. This is contrary to the invention of the instant application as claimed, which recites providing at least one transmitter at one of the opposite longitudinal end surfaces

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and connecting the transmitter to the at least one body, and providing at least one detector at one of the opposite longitudinal end surfaces and connecting the detector to the at least one body.

AAPA does not make up for the deficiencies of Lahrman.

Furthermore, the references do not show or suggest reflecting the electromagnetic radiation off the inside surface of the body on which deposits occur influencing reflection properties for the electromagnetic radiation, and detecting the reflected electromagnetic radiation with the at least one detector as recited in claim 23 of the instant application. The Lahrman reference discloses transmitting light across a circumference of a pipe section. As the chalk deposit on the pipe section (4) increases, the light radiated by the light transmitter is attenuated. The Lahrman reference does not disclose reflection of electromagnetic radiation at a surface of the pipe. This is contrary to the invention of the instant application as claimed, which recites reflecting the electromagnetic radiation off the inside surface of the body on which deposits occur influencing reflection properties for the electromagnetic radiation, and detecting the reflected electromagnetic radiation with at least one detector.



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AAPA does not make up for the deficiencies of Lahrman.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

Since claim 23 is believed to be allowable, dependent claims 25-27 are believed to be allowable as well.

In item 6 on page 5 of the Office action, claims 2, 3, 12-14, 17, 19, and 24 have been rejected as being obvious over Lahrman (U.S. Patent No. 6,035,471) in view of AAPA and further in view of Seiler et al. (U.S. Patent No. 5,804,817) (hereinafter "Seiler") under 35 U.S.C. § 103. Seiler does not make up for the deficiencies of Lahrman and AAPA. Since claims 1 and 23 are believed to be allowable, dependent claims 2, 3, 12-14, 17, 19, and 24 are believed to be allowable as well.

In item 7 on page 5 of the Office action, claims 8 and 9 have been rejected as being obvious over Lahrman (U.S. Patent No. 6,035,471) in view of AAPA and further in view of Nelson (U.S. Patent No. 6,232,603) under 35 U.S.C. § 103. Nelson does not make up for the deficiencies of Lahrman and AAPA. Since

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claim 1 is believed to be allowable, dependent claims 8 and 9 are believed to be allowable as well.

In item 8 on page 6 of the Office action, claims 7 and 10 have been rejected as being obvious over Lahrman (U.S. Patent No. 6,035,471) in view of AAPA and further in view of Coulling et al. (U.S. Patent No. 6,084,519) (hereinafter "Coulling") under 35 U.S.C. § 103. Coulling does not make up for the deficiencies of Lahrman and AAPA. Since claim 1 is believed to be allowable, dependent claims 7 and 10 are believed to be allowable as well.

Even though the claims are believed to be allowable, the following comments pertain to the combination of references in the rejections of the dependent claims in items 6-8 of the Office action.

The Lahrman reference discloses a method for determining the scaling of an optical measurement section in which the turbidity of a washing liquid is detected in a domestic appliance. The turbidity of the liquid is measured by transmitting a light beam through a cross-section of a pipe through which the washing liquid flows and measuring the light beam on the opposite side of the pipe. There are no reflecting surfaces on the pipe section. The beam of light is

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attenuated based on the amount of scaling and turbidity. The Lahrman reference does not use any reflection of light beams. Accordingly, the Lahrman reference does not require any reflecting surfaces on the pipe. Therefore, there is no motivation for a person of ordinary skill in the art to combine the teaching of Lahrman with the teachings of Seiler, Nelson, or Coulling. Furthermore, since Lahrman functions on the basis of attenuation of the transmitted light, providing reflecting surfaces in the method of Lahrman would destroy the intended function of detecting the turbidity of the washing liquid. Since combining Lahrman with any one of Seiler, Nelson, or Coulling would destroy the function of Lahrman, there is no motivation to combine any one of Seiler, Nelson, or Coulling with Lahrman.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 23. Claims 1 and 23 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claims 1 or 23, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-10, 12-15, and 17-30 are solicited.

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In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

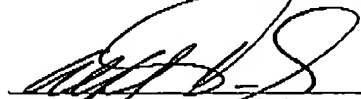
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Please charge any other fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner & Greenberg P.A., No. 12-1099.

Respectfully submitted,



For Applicant(s)

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